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COMPUTER PATENT ANNUITIES, INC.
225 Reinekers Lane
Suite 400
Alexandria, VA 22314

Payor Number: 000197

in the following listed application(s) or patent(s) for which the issue fee has been paid.

<u>Patent No.</u>	<u>Serial No.</u>	<u>Patent Date</u>	<u>US Filing Date</u>	<u>Confirmation No.</u>	<u>Attorney Docket No.</u>
7,466,294 B2	10/786,813	12/16/2008	02/25/2004	5131	0553-0399

Respectfully Submitted,



Mark J. Murphy
Registration No. 34,225
Date: April 10, 2009

COOK ALEX Ltd.
200 West Adams Street
Suite 2850
Chicago, Illinois 60606
(312) 236-8500

Customer No: 26568



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(12) United States Patent
Yamazaki et al.**(10) Patent No.: US 7,466,294 B2**
(45) Date of Patent: Dec. 16, 2008**(54) LIGHT EMITTING DEVICE AND ELECTRIC APPLIANCE****(75) Inventors:** Shunpei Yamazaki, Tokyo (JP);
Hiromichi Godo, Kanagawa (JP);
Junichiro Sakata, Kanagawa (JP);
Kaoru Tsuchiya, Kanagawa (JP)6,608,449 B2 8/2003 Fukunaga
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(73) Assignee: Semiconductor Energy Laboratory Co., Ltd. (JP)**FOREIGN PATENT DOCUMENTS****(*) Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 639 days.

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(Continued)

OTHER PUBLICATIONS**(21) Appl. No.:** 10/786,813**(22) Filed:** Feb. 25, 2004Eldis Group, "Exhibition of Active Matrix Type Organic EL Display at '13th Flat Panel Display Manufacturing Technology Expo & Conference,'" Japan; with English translation, Jul. 2, 2003.**(65) Prior Publication Data**

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(Continued)

(30) Foreign Application Priority Data

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Primary Examiner—Kevin M Nguyen
(74) Attorney, Agent, or Firm—Cook Alex Ltd.**(57) ABSTRACT****(51) Int. Cl.**
G09G 3/32 (2006.01)
(52) U.S. Cl. 345/83; 345/4; 345/76;
313/506; 313/519
(58) Field of Classification Search 345/82,
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313/519, 521
See application file for complete search history.

When materials of a cathode and an anode are transparent and a substrate with transparency is used for a substrate and a sealing substrate, luminescence from a layer including an organic compound can simultaneously perform two ways of display: luminescence passing a cathode and luminescence transmitted in an anode. However, interference effect by an optical distance difference results in difference in optical characteristics (such as a color tone) between luminescence from a top surface and luminescence from a bottom surface. According to the present invention, a light-emitting device baving luminescence from a top surface and luminescence from a bottom surface provides both luminescence to a top surface and luminescence to a bottom surface with an image display having a uniform color tone and of high quality by regulating a film thickness of a transparent conductive film disposed on a cathode side and a film thickness of a cathode.

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